

Remarks

In the official action, the Examiner rejects claims 1-10 and 19-30 as allegedly being unpatentable over US Patent No. 5,917,179 to Yao. Claims 11-18 are identified as having been withdrawn from consideration.

With respect to the prior art rejection, the Applicant respectfully traverses the rejection.

The Examiner points to Figure 5a of the '179 patent and asserts that a filter is incorporated into modulator 220. With all due respect to the Examiner, the Examiner's assertion confuses the Applicant since it is not seen where the '179 patent teaches a filter built into the modulator. However, as will be seen in the discussion set forth below, even if the Examiner's assertion is correct, the claims still cannot be read upon the '179 patent for the reasons set forth below.

Getting back to the matter of the filter, Applicant believes a filter is probably associated with the Brillouin optical medium 252 in loop 530. Please read the paragraph bridging columns 5 and 6 and the second whole paragraph in column 10 of the '179 patent.

However, no matter where the filter might be located, the disclosure of the '179 patent simply cannot be read upon claim 1. Note that element (d) of claim 1 recites "an optical path coupling an output of the filter to the laser for injection locking". In the '179 patent, regardless whether the filter is in the modulator, as assumed by the Examiner, or associated with medium 252, it is not coupled to the laser for injection locking. Note circulator 520 in Figure 5a. The optical circulator 520 has a terminal 520b which is connected via a photodetector 256 to a node 222 the optical modulator 220. Obviously, if the filter is in element 220 as asserted by the Examiner, then the node 222 on the optical modulator 220 is hardly an output coupled to an optical path for injection locking. Most importantly, the signal is running the wrong way. Element 220 of the optical modulator must be an RF input, as opposed to an output.

Now, if the filter is actually associated with medium 252, at least its connection to the

optical circulator is via an input terminal 520a. However, the signal thereat does not find its way to the laser 210 since the only connection of the laser 210 to the circulator 520 is via another input to the circulator 520c. Please read the description of the circulator in the third whole paragraph on column 10 of the '179 patent. The Examiner will note that light is routed from 520a to 520b and from 520c to 520a. Note the absence of any discussion of light traveling from 520a to 520c.

The Examiner asserts that the '179 patent lacks "a direct coupling of a discreet filter to the pump laser" as claimed. Not only does the '179 patent lack a direct coupling, the '179 patent lacks any coupling whatsoever and moreover uses a circulator to inhibit such coupling! It is submitted that it is more obvious to follow the teachings of the prior art in connection with isolating port 520a from port 520c than to disregard that teaching and effectively remove isolator 520 from the optical circuit of Figure 5a.

If the Examiner disagrees, then the Applicant has no idea of what teaching or facts the Examiner must be basing his comments upon and therefore the Examiner is respectfully requested to produce the Affidavit required by 37 CFR 1.104(d)(2) specifically setting forth such facts or to cite a prior art reference supporting his contentions.

Turning to claim 19, claim 19 is also not anticipated by the prior art for the same reason as set forth above since there is no "optical path coupling an output of the filter to the laser for injection locking" as required by claim 19. Since at least that limitation of claim 19 is not met by the prior art, the other limitations of claim 19 need not be discussed at this juncture.

Claim 23 recites "an optical path for coupling an output of the filter to the laser for injection locking the laser." That structure is also not shown by the '179 patent and therefore the other limitations of claim 23 need not be discussed at this time.

Claim 30 recites "an optical path coupling an output of the filter to the laser for injection locking". Obviously, for the reasons previously stated, the '179 patent cannot be read

upon this limitation. Therefore, the other limitations set forth in claim 30 need not be discussed at this juncture.

New claims 31-34 are added by this amendment. These are all dependent claims which recite an optical isolator disposed at the output of the laser for inhibiting reflective laser output for feeding back into the laser. That isolator is shown at numeral 12 at the output of laser 10 in Figure 1 and is discussed in the first whole paragraph under the subtitle "Detailed Description of the Invention" on page 4 of the application as filed.

With respect to claim 11, the Examiner asserts that the methods claimed are "inherent" in the structure disclosed in the '179 patent. Since the disclosed structure of the '179 patent fails to anticipate the apparatus claims, it is assumed that the Examiner will withdraw this grounds for rejection. If not, then the Examiner is reminded of the fact that 37 CFR 1.104(c)(2) indicates that when "a reference is complex or shows or describes inventions other than that claimed by the Applicant, the particular part relied upon must be designated as nearly as practicable" by the Examiner. Since the Examiner has not spelled out, with any specificity, how claim 11 allegedly is anticipated or obvious in view of the disclosure of the '179 patent, the Applicant should not have to speculate as to why the Examiner is asserting that that claim is allegedly not patentable over the '179 patent. If the Examiner continues to apply the '179 patent against claim 11, the Examiner is respectfully requested to comply with the rules of practice and, in this connection, point out with specificity where each and every limitation of claim 11 can be allegedly read upon the reference. In this connection, where does the '179 patent teach "shifting the frequency of the tapped optical signal to thereby define a shifted optical signal" and "feeding the shifted optical signal back into the input of the distributed feedback laser" as specifically claimed by claim 11?

Reconsideration of this application as amended is respectfully requested.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

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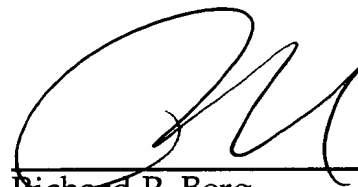
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Respectfully submitted,



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